

D2

11/20

The polymer of claim 19 wherein having a melt strength  $\geq 8.0 - 6.0 \times \log(\text{MI})$ .

### REMARKS

Please reconsider this application based on the amendments and following remarks.

- Claims 10-20 are pending in this Application.
- Claims 10-20 are rejected.

Claim 19 as been amended so that it recites a catalyst commensurate in scope with the catalysts disclosed in the specification. Support for the amendment is found at page 3, lines 3-24, of the specification.

Thus, these changes add no new matter, and should be entered at this time. For the reasons that follow, all claims are in condition for allowance.

### 35 U.S.C. § 102 and 35 U.S.C. § 103

All claims stand rejected as anticipated or as obvious over Jejelowo, U.S. Patent No. 5, 359, 015 ('015).

Jejelowo fails to teach that the metallocene catalyst must have 3-10 substituents on the  $\pi$ -bonded cyclopentadienyl rings. As amended, claim 19 and those that depend from it require such a substitution pattern. This difference in process step, supplying a 3-10-substituent metallocene versus the 2-substituent metallocene of Jejelowo, results in a different polymer product. This can be seen by reference to Applicants' Examples 1 and 2 and comparative example 3 and these examples corresponding DSC traces depicted in Figures 1 and 2, as filed.

Upon applying Applicants' substituent restraint, the resulting polymer switches from a bimodal melting point to a unimodal melting point. See Figures.

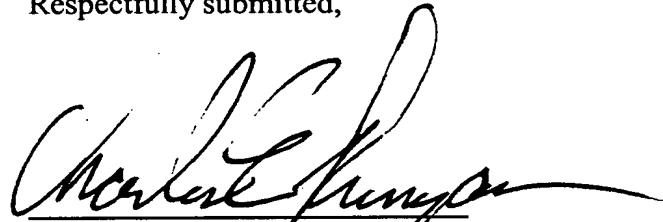
The prior art of record does not teach or suggest that changing the substitution pattern as Applicants' did will lead to such a change in melting point behavior. Therefore, the prior art does not make Applicants' claims obvious. Since Jejelowo does not teach Applicants' substitution pattern, Jejelowo does not anticipate Applicants' claims.

Since all claims are in a condition for allowance, please issue a Notice of Allowability so stating.

Thank you for the helpful comments and suggestions.

Please contact me if you think doing so will be helpful.

Respectfully submitted,



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**APPENDIX A****MARKED-UP CLAIMS****CLAIMS**

10. (Amended once) The homopolymer or copolymer of claim 19 wherein the melt strength is  $\geq 6.0$ - $6.0 \times \log(\text{MI})$ .
11. (Amended twice) The polymer of claim 19 where the MI is 0.3 to 1.2.
12. (Amended twice) The polymer of claim 19 where the MIR is  $\leq$  than 25.
13. (Amended twice) The polymer of claim 19 consisting of ethylene.
14. (Amended twice) The polymer of claim 19 comprising ethylene and one or more C<sub>3</sub>-C<sub>8</sub>  $\alpha$ -olefin.
15. The polymer of claim 11 consisting of ethylene.
16. The polymer of claim 11 comprising ethylene and one or more C<sub>3</sub>-C<sub>8</sub>  $\alpha$ -olefin.
17. The polymer of claim 12 consisting of ethylene.
18. The polymer of claim 12 comprising ethylene and one or more C<sub>3</sub>-C<sub>8</sub>  $\alpha$ -olefin.
19. (amended once) A polymer produced using a process comprising providing a [bridged] metallocene catalyst wherein the catalyst is a Group 3-6 metallocene catalyst compound comprising a  $\pi$ -bonded ring

having one or more C<sub>3</sub> or greater hydrocarbyl, hydrocarbysilyl or hydrocarbylgermyl substituent bonded to the ring through a primary carbon atom; and when the compound contains two  $\pi$ -bonded rings, the total number of substituents on the rings is equal to a number from 3 to 10, and when the number of substituents is 3 or 4 the rings asymmetrically substituted

wherein the polymer has

- (a) an MIR  $\leq$  35 and
- (b) a CDBI  $\geq$  60.

20. The polymer of claim 19 wherein having a melt strength  $\geq$  8.0 - 6.0 x log(MI).